MACROPICOLA OCYDROMI N.G. N.SP. (NEMATODA: STRONGYLIDAE) FROM A WESTERN AUSTRALIAN KANGAROO

by PATRICIA M. MAWSON*

Summary

MAWSON, P. M. (1978) *Macropicola ocydromi* n.g., n.sp. (Nematoda: Strongylidae) from a Western Australian kangaroo. *Trans R. Soc. S. Aust.* **102**(4), 113-115, 31 May 1978.

The new genus is placed in the family Strongylidae, sub-family Globocephalinae, because of the large subglobular buccal capsule, without leaf crown, cutting plates, or anterior teeth, with regid mouth opening, and with three large oesophageal teeth. It differs from *Globocephalus* in the number of teeth, form of the dorsal ray, and position of the vulva.

Introduction

The new species and genus described in this paper is one of the only two strongylid nematodes to be found in Australian marsupials. The first, now under description, was also from a macropod.

The genus *Hypodontus* Mönnig 1929, previously considered a strongylid (s.f. Uncinariinae), was discussed by Inglis (1968) who referred it to the Amidostomatidae. This genus is at present under revision (Beveridge, in preparation).

Holotype male and allotype female of *Macropicola ocydromi* will be deposited in the South Australian Museum. Other material is in the Australian National Helminth Collection, in the South Australian Museum.

All worms were fixed in hot formalin, and cleared for light microscope examination in lactophenol. Specimens for use in the S.E.M. were brought through ethanol to xylol, and coated first with carbon, and then gold-palladium.

Macropicola n.g.

Strongylidae: Globocephalinae: Anterior end with flattened cuticular cap surrounding hexagonal mouth opening and bearing amphids and submedian papillae. Buccal capsule large, subglobular, with dorsal groove, and with three solid multi-tuberculate oesophageal teeth. Oesophagus clubshaped. Male: bursa entire, not deeply lobed, ventral rays together, ventrolaterals separate from postero and mediolaterals, externo-dorsal from dorsal ray, dorsal ray bifurcate each branch dividing again; spicules long, alate; gubermaculum present. Female: tail short, conical; vulva close to anus, ovejectors parallel, uteri pro-delphous. Parasites of the large intestine of macropod marsupials. Type species: *Macropicola ocydromi* n. sp.

This genus has been placed in the family Strongylidae rather than the Trichonematidae because of the subglobular shape of the well-developed buccal capsule. It has been referred to the subfamily Globocephalinae because of the absence of leaf crown, teeth or cutting plates around the mouth. Of genera in this group, *Macropicola* most closely resembles *Globocephalus* Molin (1861), differing from it in the number of final branches of the dorsal ray, the number of oesophageal teeth, and the more posterior position of the vulva. *Globocephalus marsupialis* Freitas & Lent (1936) was described from a South American marsupial, *Metachirops opossum*.

The only other strongylid from Australian marsupials is the new genus being described by Dr J. Beveridge. This differs markedly from *Macropicola* in the presence of two well developed leaf crowns.

Macropicola ocydromi n.g., n.sp.

FIGS 1–9

Host and localities: *Macropus fuliginosus ocydromus* Gould, from near Albany (5 ♀,

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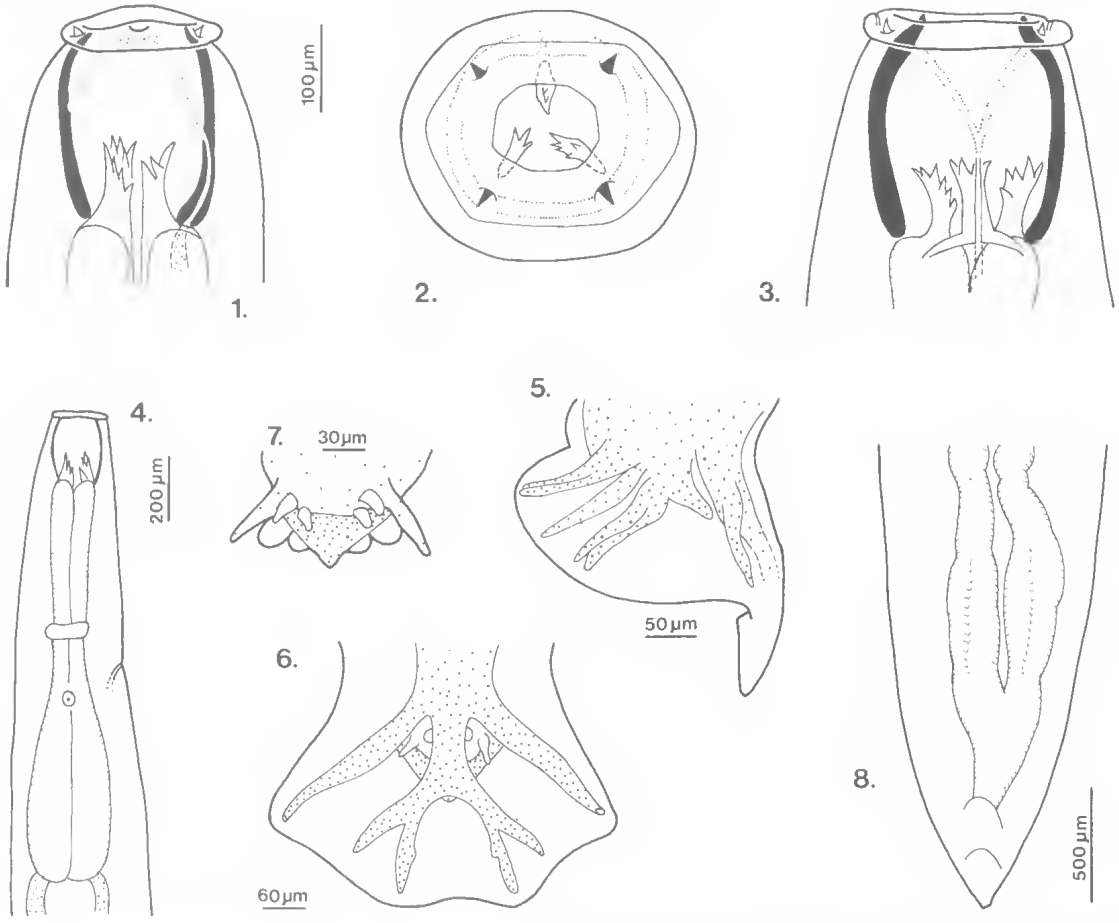
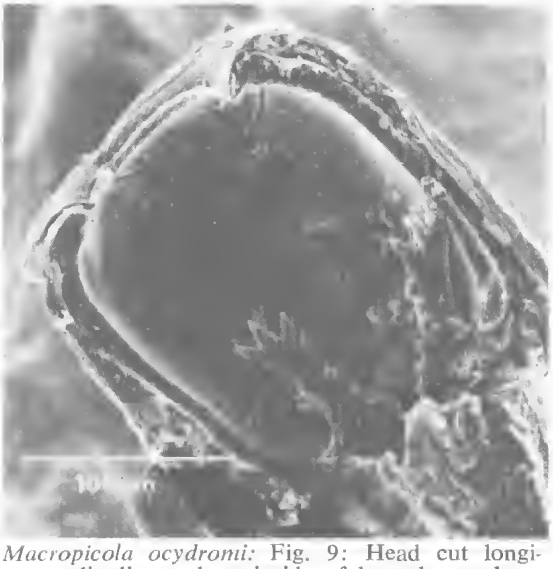


Macropicola ocydromi: Figs 1–3: Head. In lateral, en face, and dorsal views, respectively, to same scale. Fig. 4: Oesophageal region. Figs 5–6: Bursa in lateral and dorsal views. Fig. 7: Genital cone, dorsal view. Fig. 8: Posterior end of female.



Macropicola ocydromi: Fig. 9: Head cut longitudinally to show inside of buccal capsule.

4 ♂, from 1 host), Jandacot Experimental Stn, W.A. (5 ♀ from one host), and near Perth (2♀, 1 ♂, from one host).

Males 12.8–13.6 mm long, females 18.3–20.4 mm, tapering only slightly anteriorly and posteriorly. Cephalic cuticle forms thick flattened plate, slightly wider than succeeding body, and bears four small conical submedian papillae, two amphids, and a central anteriorly directed octagonal mouth opening. Buccal capsule longer than wide and widest at its midlength (Figs 1, 2). Dorsal wall of capsule thicker in its basal quarter length, where it is penetrated by the duct of dorsal oesophageal gland; after its emergence through wall the duct connects with encircling groove, cut into capsule, following a course as shown in Figs. 1 and 2. From each of the three sections of ocsophagus a stout tooth projects into buccal cavity, each tooth provided with a number of short pointed

projections (Figs 1, 2, 3, 9). Oesophagus 1400–1500 μm in male, 1600–1800 μm in female, cylindrical anteriorly widening posteriorly. Nerve ring 690–750 μm from head in male, 700–770 μm in female. Small conical cervical papillae and excretory pore shortly behind nerve ring (Fig. 4).

Male: Bursa entire, longer dorsally. Arrangement of rays shown in Figs 5 and 6. Posterolateral ray with branch from its base, passing dorsally. Genital cone (Fig. 7) large, posterior lip of cloaca with three pairs short projections. Spicules 990–1000 μm long, giving a ratio of spicule : body length of 12.8–13.6.

Female: Body tapers suddenly in region of vagina to short conical tail, 130–190 μm long. Vulva 220–300 μm from tip of tail, vagina short, ovejectors parallel, prodelphous. Egg in uterus (none in vagina) 150 x 70 μm.

The specimens described in this paper were collected by N. Allen, and were sent to me by Dr G. de Chaneet of the Animal Health Laboratory, Department of Agriculture, Western Australia. I am very grateful to have received this material. The photomicrographs were taken by E.T.E.C. Autoscan in the Central Electron Optical Laboratory of the University of Adelaide. I am indebted to Dr Karl Bartusek of this laboratory for help in taking the micrographs and to P. G. Kempster for developing and printing them.

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